



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,746	03/21/2006	Kazuyuki Matsumura	MATS3038/GAL	3304

23364	7590	12/10/2007
BACON & THOMAS, PLLC		
625 SLATERS LANE		
FOURTH FLOOR		
ALEXANDRIA, VA 22314		

EXAMINER	
RAMDHANIE, BOBBY	

ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
12/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/572,746

Applicant(s)

MATSUMURA ET AL.

Examiner

Bobby Ramdhanie, Ph.D.

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanegasaki et al (JP 2002-159287) in further view of Wunderlich (US3625391) and Kanegasaki et al (2003). Regarding Claim 1, Kanegasaki teaches a cell observation chamber in an apparatus used for detecting cell chemotaxis and for isolating chemotactic cells, said chamber comprising: A). A dish-shaped bottom support body with a window for observing the movement of cells provided in the center of the bottom part thereof (Drawing 22, Item Number 22), B). A glass substrate adapted to be placed on the bottom surface of said bottom support body (Drawing 22, Item Number 8); C). A dish-shaped intermediate support body with an opening portion formed in the center of the bottom part thereof, said intermediate support body being adapted to be attached to

said bottom support body to press and fix said glass substrate from above onto the bottom surface of said bottom support body (Drawing 22, Item Number 21); D). A substrate with a plurality of through holes for guiding cell suspension and chemotactic factor containing solution there through formed therein in a vertically penetrating manner; said substrate being adapted to be fixed onto the surface in the central part of said glass substrate, in which a concavo-convex shape is formed in the surface facing said glass substrate to form at least a pair of wells and a flow path for communicating of said wells with said glass substrate (Drawing 22 Item number 7); E). A packing member with a plurality of through holes for guiding said cell suspension and said chemotactic factor containing solution there through formed therein in a vertically penetrating manner (Drawing 22, Item Number 16), F). Said packing member being adapted to be fitted into said opening portion that is formed in the center of the bottom part of said intermediate support body to press said substrate from above (Drawing 22, Item Numbers 7, 16, & 21) ; and G). A dish-shaped cover block body with a plurality of through holes for guiding said cell suspension and said chemotactic factor containing solution there through formed in the center of the bottom part thereof in a vertically penetrating manner (Drawing 22 Item number 17), and H). Said cover block body being adapted to be attached to said bottom support body with said intermediate support body attached thereto to press and fix said substrate from above onto said glass substrate through said packing member (Drawing 22); I). Wherein one of said pair of wells is adapted to be provided or given with said cell suspension through each one of said plurality of through holes that are formed, respectively, in said cover block body, said

packing member, and said substrate, while the other of said wells is adapted to be provided or given with said chemotactic factor containing solution through each one of said plurality of through holes that are formed, respectively, in said cover block body, said packing member, and said substrate, so that a state where cells move from one to the other of said wells through said flow path is observed and the number of said cells is measured through said window provided in said bottom support body (Drawing 3). Kanegasaki et al does not teach the attachment of said intermediate support body to said bottom support body and of said cover block body to said bottom support body is achieved by bringing the respective contact surfaces into vertically pressurized contact with each other using lever mechanisms or clamp mechanisms with a cam mechanism incorporated therein. Wunderlich et al teaches this feature (Column 1 lines 1-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kanegasaki et al with Wunderlich because according to Kanegasaki et al 2003, other assemblies are used for holding the device together (Page 2 Right Column Bottom of last Paragraph).

4. For Claim 2, Kanegasaki et al in combination with Wunderlich and Kanegasaki et al 2003, teaches all of the claim limitations of Claim 1. Wunderlich et al further teaches the cell observation chamber according to Claim 1, wherein said cam mechanism comprises: cam grooves formed (Figure 4, Item Number 54), one U-shaped lever that is supported rotatably by said bottom support body (Figure 1 Item number 16); pins implanted, respectively, at two corresponding points on the outer peripheral surface of said intermediate support body (Figure 2 Item numbers 25) and said cover block body,

said pins being adapted to move within said cam grooves in a sliding manner (Figure 4 Item Number 55). Kanegasaki et al, Wunderlich, and Kanegasaki et al 2003, do not teach that there are two u-shaped levers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above combination to have two u-shaped levers because in addition to being an obvious variant of the combination listed above, Kanegasaki et al 2003, states other assemblies are used for holding the device together (Page 2 Right Column Bottom of last Paragraph).

5. For Claim 3, Kanegasaki et al in combination with Wunderlich and Kanegasaki et al 2003, teaches all of the claim limitations of Claim 1. Kanegasaki et al 2003 further teaches the cell observation chamber according to claim 1, wherein a guide block body is further attached to said cover block body, in said guide block body being formed a plurality of through holes (Page 2, Materials and Method) for guiding a micropipette that has inhaled either said cell suspension or said chemotactic factor containing solution there through in a vertically penetrating manner.

6. Alternatively, Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanegasaki et al (WO02/46356. An English translation of this Japanese document can be found in US7259008. Rejections given are based off of the English translation) in further view of Wunderlich (US3625391) and Kanegasaki et al (2003). Regarding Claim 1, Kanegasaki et al teaches a cell observation chamber in an apparatus used for detecting cell chemotaxis and for isolating chemotactic cells, said chamber comprising: A). A dish-shaped bottom support body with a window for observing the movement of cells provided in the center of the bottom part thereof

(Figure 20, Item Number 22), B). A glass substrate adapted to be placed on the bottom surface of said bottom support body (Figure 20, Item Number 6); C). A dish-shaped intermediate support body with an opening portion formed in the center of the bottom part thereof, said intermediate support body being adapted to be attached to said bottom support body to press and fix said glass substrate from above onto the bottom surface of said bottom support body (Figure 20, Item Number 21); D). A substrate with a plurality of through holes for guiding cell suspension and chemotactic factor containing solution there through formed therein in a vertically penetrating manner, said substrate being adapted to be fixed onto the surface in the central part of said glass substrate, in which a concavo-convex shape is formed in the surface facing said glass substrate to form at least a pair of wells and a flow path for communicating of said wells with said glass substrate (Figure 20 Item number 5); E). A packing member with a plurality of through holes for guiding said cell suspension and said chemotactic factor containing solution there through formed therein in a vertically penetrating manner (Figure 20, Item Number 5'), F). Said packing member being adapted to be fitted into said opening portion that is formed in the center of the bottom part of said intermediate support body to press said substrate from above (Figure 20, Item Numbers 5, 5', & 21) ; and G). A dish-shaped cover block body with a plurality of through holes for guiding said cell suspension and said chemotactic factor containing solution there through formed in the center of the bottom part thereof in a vertically penetrating manner (Figure 20 Item number 17), and H). Said cover block body being adapted to be attached to said bottom support body with said intermediate support body attached thereto to press and fix said

substrate from above onto said glass substrate through said packing member (Figure 20); I). Wherein one of said pair of wells is adapted to be provided or given with said cell suspension through each one of said plurality of through holes that are formed, respectively, in said cover block body, said packing member, and said substrate, while the other of said wells is adapted to be provided or given with said chemotactic factor containing solution through each one of said plurality of through holes that are formed, respectively, in said cover block body, said packing member, and said substrate, so that a state where cells move from one to the other of said wells through said flow path is observed and the number of said cells is measured through said window provided in said bottom support body (Figure 1). Kanegasaki et al does not teach the attachment of said intermediate support body to said bottom support body and of said cover block body to said bottom support body is achieved by bringing the respective contact surfaces into vertically pressurized contact with each other using lever mechanisms or clamp mechanisms with a cam mechanism incorporated therein. Wunderlich et al teaches this feature (Column 1 lines 1-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kanegasaki et al with Wunderlich because according to Kanegasaki et al 2003, other assemblies are used for holding the device together (Page 2 Right Column Bottom of last Paragraph).

7. For Claim 2, Kanegasaki et al (WO/0246356) in combination with Wunderlich and Kanegasaki et al 2003, teaches all of the claim limitations of Claim 1. Wunderlich et al further teaches the cell observation chamber according to Claim 1, wherein said cam mechanism comprises: cam grooves formed (Figure 4, Item Number 54), one U-shaped

lever that is supported rotatably by said bottom support body (Figure 1 Item number 16); pins implanted, respectively, at two corresponding points on the outer peripheral surface of said intermediate support body (Figure 2 Item numbers 25) and said cover block body, said pins being adapted to move within said cam grooves in a sliding manner (Figure 4 Item Number 55). Kanegasaki et al (WO/0246356), Wunderlich, and Kanegasaki et al 2003, do not teach that there are two u-shaped levers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above combination to have two u-shaped levers because in addition to being an obvious variant of the combination listed above, Kanegasaki et al 2003 states other assemblies are used for holding the device together (Page 2 Right Column Bottom of last Paragraph).

8. For Claim 3, Kanegasaki et al (WO/0246356), in combination with Wunderlich and Kanegasaki et al 2003, teaches all of the claim limitations of Claim 1. Kanegasaki et al 2003 further teaches the cell observation chamber according to claim 1, wherein a guide block body is further attached to said cover block body, in said guide block body being formed a plurality of through holes (Page 2, Materials and Method) for guiding a micropipette that has inhaled either said cell suspension or said chemotactic factor containing solution there through in a vertically penetrating manner.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

2. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of copending Application No. 10/572801. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following:

Claims 1-3 of the instant application recite "A cell observation chamber in an apparatus used for detecting cell chemotaxis and for isolating chemotactic cells, said chamber comprising: One of said pair of wells is adapted to be provided or given with said cell suspension through each one of said plurality of through holes that are formed, respectively, in said cover block body, said packing member, and said substrate, while

the other of said wells is adapted to be provided or given with said chemotactic factor containing solution through each one of said plurality of through holes that are formed, respectively...”

Claims 1-3 of Application Number 10/572801 recite “A cell observation chamber comprising therein a pair of wells and a flow path for communicating of said wells and being arranged in such a manner that cells in cell suspension stored in one of said pair of wells can react with chemotactic factor containing solution stored in the other of said wells to move from one to the other of said wells through said flow path.”

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bobby Ramdhanie, Ph.D. whose telephone number is 571-272-1447. The examiner can normally be reached on Mon-Fri 8-5 (Alt Fri off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BR


WALTER D. GRIFFIN
SUPERVISORY PATENT EXAMINER